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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,739	07/16/2003	Vasilis Z. Marmarelis	064693-0073	8989

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MCDERMOTT, WILL & EMERY
Suite 3400
2049 Century Park East
Los Angeles, CA 90067

EXAMINER

IMAM, ALI M

ART UNIT PAPER NUMBER

3737

DATE MAILED: 03/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/620,739

Applicant(s)MARMARELIS, VASILIS Z. ed**Examiner**

Ali Imam

Art Unit

3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/2/4</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-16, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jesseph (US 6,254,614 of record) in view of Castro (US 5,308,321 of record).

Jesseph teaches in Fig. 2 (reproduced below) a receptacle for supporting a breast during ultrasonic scanning comprising a contoured cup (20) made of material that is substantially

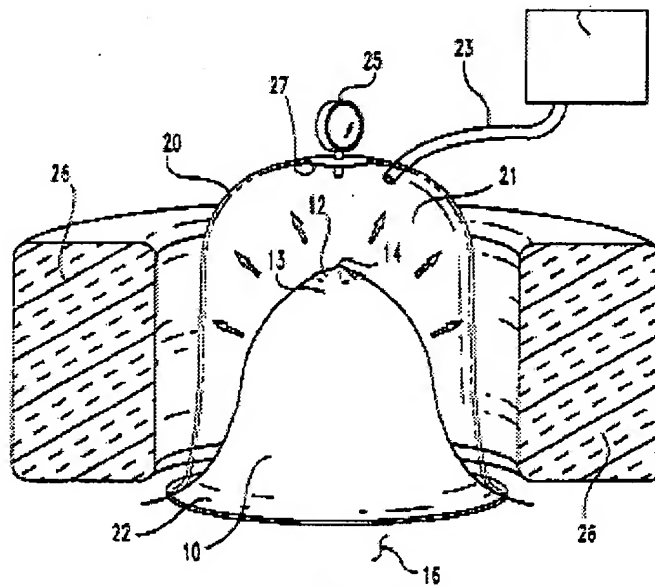


Fig. 2

transparent to acoustical energy and having an open end (see Fig. 2 above) into which the breast (10) may be inserted. Jesseph further teaches that the cup can be of many different

Art Unit: 3737

configurations (col. 5, lines 22-26) which would obviously include a narrowed end configured to receive the nipple of the breast.

Jesseph fails to mention specifically the claimed spaced-apart elongated members.

Castro teaches a spaced-apart elongated members (see Fig. 2 below).

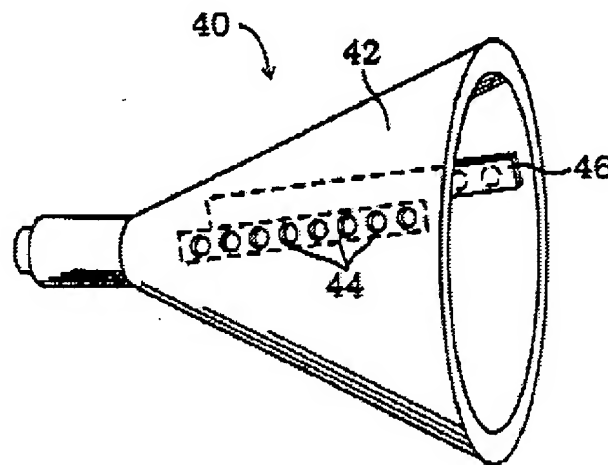


FIG. 2

Therefore, it would have been obvious to an ordinary skill in the art to modify Jesseph's contoured cup-like support vessel such that it includes spaced apart elongated members non-transparent acoustically to serve as a grid and mechanically coupled to the cup in order to provide a reference for the ensonation location of a lesion.

3. Claims 17-18, 20, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jesseph and Castro and further in view of Bechtold et al. (US 6,128,523 of record). The combined invention of Jesseph and Castro teaches all the limitations of the claimed subject matter except for mentioning specifically the use of elastic latex and couplant gel as useful materials. Bechtold teaches the use of elastic latex and couplant gel during ultrasound breast

Art Unit: 3737

imaging (col. 6, line 38). Therefore, it would have been obvious to an ordinary skill in the art at the time the invention was made to modify the combined invention of Jesseph and Castro such that it provides the use of elastic latex and couplant material in order to facilitate coupling during ultrasound imaging. Bechtold evidences that the use of a tabletop having an opening to accommodate a breast during ultrasound imaging is well known (see Fig. 3 below of the Bechtold patent).

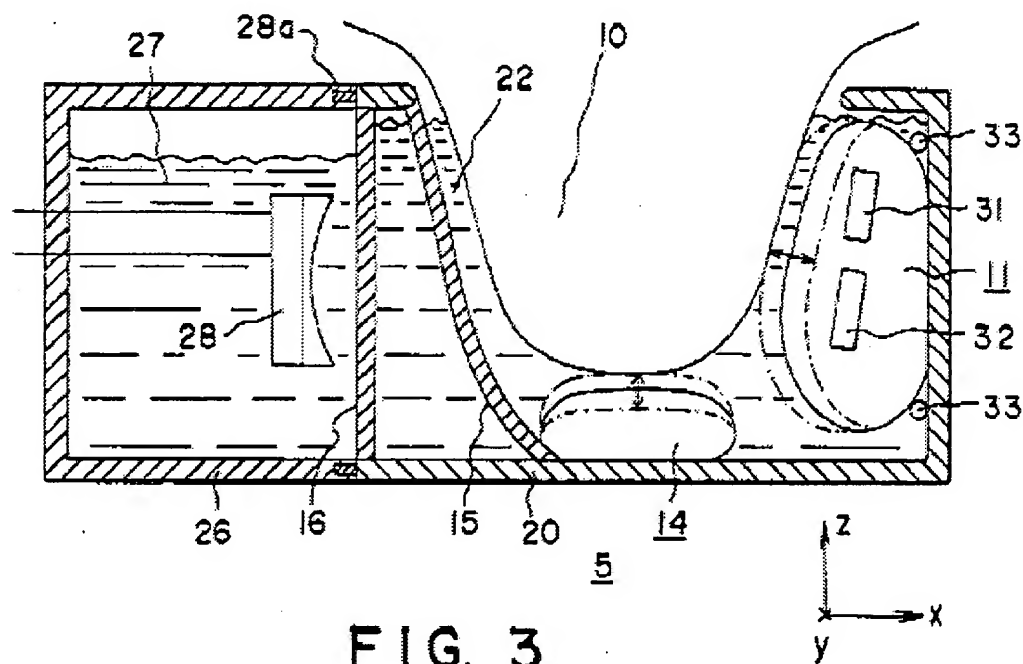


FIG. 3

4. Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US 6,146,377 of record). Lee teaches leaving an opening for an instrument approach and for which scanner access and mechanical coupling would be an obvious variant during mammographic exam (col. 7, lines 1-46).

Art Unit: 3737

5. Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jesseph and Castro and further in view of Hong (US 6,478,739 of record). The combined invention of Jesseph and Castro teaches all the limitations of the claimed subject matter except for mentioning specifically a rotatable mechanism and a pump. Hong teaches in Fig. 6 and in col. 5, lines 5-29 an ultrasound breast imaging system including a rotatable mechanism and a pump. Therefore, it would have been obvious to an ordinary skill in the art at the time the invention was made to modify the combined invention of Jesseph and Castro such that it provides a rotatable mechanism and a pump so that the transducer can be rotated around the breast and fluid can be flowed across the breast for increasing image resolution during mammographic exam.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Imam whose telephone number is 571-272-4737. The examiner can normally be reached on Mon. - Th., 8:00- 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR

Art Unit: 3737

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Ali Imam', with a long horizontal line extending to the right.

Ali Imam

Primary Examiner

Art Unit 3737

AI

3/11/5